CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

41

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8/11/88

SUBJ: MAINTENANCE BULLETINS

1. PURPOSE. This change transmits:

a. Maintenance Bulletin No. 27-25, Lockheed L-1011 Aircraft - Separation of Number Three Flap Vane.

b Maintenance Bulletin No. 38-2, Lockheed L-1011 Aircraft - Potable Water System.

2. DISPOSITION OF TRANSMITTAL. This, transmittal may be retained.

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		2	8/11/88

Raymond E. Ramakis

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Manager, Aircraft Maintenance Division
Office of Flight Standards

Distribution: ZVS-834 **Initiated By:** AFS-330

*38-1. HAZARDS OF ICE ACCUMULATIONS SEPARATING FROM AIRCRAFT IN FLIGHT. Water leakage at the lavatory and potable water service fittings has resulted in ice accumulations and subsequent ice falling from the aircraft while in flight. Ice accumulation may separate from the aircraft due to weight of the massive ice build-up, and/or when the aircraft descends into warmer ambient air.

Reports on ice accumulation with separation include the following:

a. An ice chunk estimated at 30 pounds falling from an aircraft penetrated the garage roof of a private residence. Investigation of the aircraft records and interviews with servicing personnel on this matter revealed that ice on the potable water service fittings had to be chipped away before valve could be secured. The valve had been left open, the aft water tank was collapsed and a line had ruptured. There were no position markings, as required, to indicate servicing valve position and it was possible to close the service access door with the valve in the open position.

b. The separation of a turbojet engine from the aircraft at 33,000 feet was attributed to the stoppage of the engine first stage fan. Possible engine failure due to ingestion of ice accumulations could not be substantiated. However, waste water drain stains were traced from a leaking lavatory service door on the forward right lower fuselage, aft to a broken landing light lens and then over the wing directly in line with the failed engine inlet.

Investigation of the aircraft records revealed previous incidents of damage to the right wing, leading edge flap, and broken landing light lens. The cause of this damage was not recorded.

Investigation of forward lavatory drain revealed that the "donut plug" drain valve was not properly seated permitting waste water to leak from the tank during flight. For external leakage both the drain valve and the drain line cap must leak. The cap contains an inner seal and if in good condition should prevent leakage. Personnel who service the lavatory should assure that the "donut plug" has completely seated following each service operation.

Ice accumulation on the surface of an aircraft may adversely affect performance and control. Further, ice accumulation separation in flight creates a hazardous condition to personnel and property on the ground and may damage the wing, empennage and/or engine of the aircraft.

It is recommended that this information be brought to the attention of each certificate holder and encourage routine inspection of water service fittings, the drain line cap inner seal and proper valve operation.

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